

Attorney Docket No.: UMD0067US.NP  
Inventors: Welsh et al.  
Serial No.: 10/565,417  
Filing Date: August 3, 2006  
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This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method of imputing missing values in microarray data comprising the steps of:

(a) clustering the data by a Gaussian mixture clustering (GMC) model, which imposes a mixture of multivariate normal distributions;

(b) estimating missing values by a GMCimpute algorithm so that missing values in microarray data are imputed; and

(c) outputting the missing values to a display or memory.

Claim 2 (previously presented): The method of claim 1, wherein the Gaussian mixture clustering (GMC) model comprises the steps of

(a) determining a value of  $K$  (number of clusters) for microarray data comprising rows and columns;

(b) partitioning the rows of the microarray data into  $K$  partitions; and

(c) repeating a Classification Expectation-Maximization algorithm until the  $K$  partitions converge.

Claim 3 (previously presented): A computer-readable medium encoded with a computer program, wherein the computer program, once executed by a computer processor, performs a method of imputing missing values in microarray data according to the method of claim 1.

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Claim 4 (previously presented): The computer-readable medium of claim 3, wherein the Gaussian mixture clustering (GMC) model comprises the steps of

- (a) determining a value of  $K$  (number of clusters) for microarray data comprising rows and columns;
- (b) partitioning the rows of the microarray data into  $K$  partitions; and
- (c) repeating a Classification Expectation-Maximization algorithm until the  $K$  partitions converge.

Claims 5-8 (canceled).